sliding into the other and fixed at various lengths by a middle screw at each end. In the excision the bone surfaces are sawed straight and at right angles with the long axis of the bone. A hole is then bored in the lower end of the femur and one in the upper end of the tibia for the screws which are to fix the splint to the bones. The two pieces of the splint are made movable by loosening the middle screw, and are applied to the bones so that the holes in the ends are just over those in the bones, for the introduction of the screws. After these have been introduced and each splint piece has been screwed to the corresponding bone, the sawed surfaces of the two bones are pressed together in good position and the middle screw is made tight. The end screws are prevented from slipping in the holes of the splint by a small lateral screw for each. This permits the splint to be held away from the bones by the end screws, so that it remains 2 to 3 cm. above the skin surface. This renders the changing of dressings very easy. The limb is finally laid on a Volkmann's splint. In 4 out of 5 cases in which the method was employed, good bony union was obtained. In the fifth case amputation was later necessary, because of the general condition of the patient.

After-treatment of Excision of the Knee.—MERKENS (*Zentralbl. f. Chir.*, 1912, xxxix, 949) following Kocher, does away with all means of fixing the bone ends, aside from that furnished by the bandage. The end of the femur is sawed convexly, that of the tibia concavely. He advocates cleansing the joint cavity; division of the flexor tendons in children; adaptation of the bones; and the introduction of skin and fascial sutures. He believes ligation of the vessels is usually unnecessary, and, if possible, that no drainage should be used. While the bones are held in extension and closely together by a reliable assistant, the knee region is surrounded by a gauze-cotton dressing. The tourniquet is loosened. A plaster cast is then applied including the foot and the pelvis and extending to the umbilicus. The fixation is so good that on recovering from the narcosis the patients have no pain. If the cast presses anywhere this should be corrected. It is not removed for six to eight weeks when bony union is complete, and after removal of the skin sutures it is replaced by a lighter cast. If necessary to expose the wound a window can be made, although this will rarely be necessary. The good fixation and absence of suture material favors the primary union. Merkins regards the Kolb-Wilms apparatus as complicated.

The Technique and After-treatment of Excision of the Tuberculous Knee.—RIEDEL (*Zentralbl. f. Chir.*, 1912, xxxix, 1125) describes the operation which he calls a radical one. The transverse Volkmann incision extends to 1 to 2 cm. from the posterior surface of the knee on each side, and at each end is combined with a longitudinal incision extending about 6 cm. above and below. The sawing of the bones is begun with the limb extended to favor a correct position of the limb later, but is carried only to a depth of about 2 cm. The knee is now flexed for the first time and the sawing completed. After thoroughly cleansing away diseased tissue and ligation of all visible vessels, the limb is elevated, and the tourniquet removed. After about fifteen minutes the limb is brought down and the patella which has been sawed transversely, is united by three thick catgut sutures passing around the bone. Then the transverse incision is sutured with catgut and the longitudinal wounds left open. No drainage is employed. An attendant on the operating table holds the limb vertically without traction on the foot. The sawed ends of the bones are fitted together and the knee is surrounded smoothly by one gauze layer after another, winding them firmly. Then follow the layers of gauze covering the limb above and below about 20 cm. from the wound. Upon the gauze are laid sterilized, very thin wooden splints (40 cm. long, 2 or 3 cm. wide, and 1.5 mm. thick) and more gauze is wound around them. When the bones are thus secured the attendant leaves the table and the limb is brought to the horizontal. A support is placed under the pelvis and the limb is covered with gauze, over these being placed long flexible wooden splints. Then the whole limb from the foot to the pelvis is wrapped in cotton in which is incorporated a thick wooden splint on the outer side. This is fixed as far as the waist by a bandage. Finally a Volkmann splint is applied to the knee. This dressing is allowed to remain in position six weeks, and at the end of that time it will be found almost always that union of the bones has taken place. The transverse wound is healed firmly, and at the site of the longitudinal wounds are strips of granulation tissue, which quickly heal over after removal of the granulations. Riedel emphasizes three details: (1) The sawing through the bones while they are in the horizontal position. A mild genuvalgum, more marked in women with their broader pelves than in men, is the normal position. (2) The first short bandage should be applied with the limb in the vertical position. (3) The dressing can be permitted to remain in position until union is complete because no foreign body (silk ligatures, drainage tubes) are left in. Riedel never employs a plaster cast.

The Technique and After-treatment of Excision of the Knee.—Kausch (*Zentralbl. f. Chir.*, 1912, xxxix, 1125) offers a contribution from his experience with excision of the knee, because his methods differ from the preceding in essential points. He observes the teaching of Mikulicz's clinic, making a transverse incision and sawing through the patella. Occasionally, he makes other incisions in order to follow and excise fistulæ. Like Riedel, he emphasizes the necessity of a radical procedure. He always saws the femoral condyle convexly and the tibia concavely. This curved sawing, while not easy, is not very difficult but requires a thin-bladed saw. Whenever possible, it should be so done as not to require correction, but when correction is necessary it can be done best by a large file with an even convex surface. The physiological valgus position should be preserved. It is not necessary that the sawed surfaces should be in exact apposition, nor does it do any harm if the removal of a focus leaves a hole or if there remains a defect in the intercondyloid fossa. The curved sawing usually permits the removal of the bone foci without taking away much bone, in consequence of which there is less shortening than when the sawing is done in a straight line. As a rule, the femur is more involved